

IN THE CLAIMS:

Please amend the claims as follows. This listing replaces all prior versions.

1. (currently amended) A microarray of oligonucleotides, said microarray comprising a plurality of HLA Class I oligonucleotide probes on a solid support, said probes having a surface density on said microarray of from about 250 to about 450 angstrom²/molecule, wherein said plurality of probes comprises at least 80% of polymorphisms in the HLA Class I locus, and wherein said oligonucleotide probes are covalently attached to said support and have from 17 to 23 nucleotides.

2. (previously presented) A microarray in accordance with claim 1, wherein said plurality of probes comprises at least 90% of polymorphisms in the HLA Class I locus.

3. (previously presented) A microarray in accordance with claim 1, wherein said plurality of probes comprises at least 98% of polymorphisms in the HLA Class I locus.

4. (cancelled)

5. (previously presented) A microarray in accordance with claim 4, wherein said oligonucleotide probes have 20 nucleotides.

6. (previously presented) A microarray in accordance with claim 1, wherein said HLA Class I oligonucleotide probes are selected from the group consisting of HLA-A oligonucleotide probes, HLA-B oligonucleotide probes and HLA-C oligonucleotide probes.

7. (previously presented) A microarray in accordance with claim 1, wherein said HLA Class I oligonucleotide probes are selected from the group consisting of HLA-A exon 2 and exon 3 oligonucleotide probes, HLA-B exon 2 and exon 3 oligonucleotide probes and HLA-C exon 2 and exon 3 oligonucleotide probes.

8. (previously presented) A microarray in accordance with claim 1, wherein said HLA Class I oligonucleotide probes are selected from the group consisting of HLA-B exon 2 and exon 3 oligonucleotide probes.

9. (currently amended) A microarray in accordance with claim 1[[4]], wherein said solid support is a glass slide.

10. (currently amended) A microarray in accordance with claim 1[[4]], wherein said oligonucleotide probes are present on said solid support at a surface density of from ~~about~~ 250 to ~~about~~ 450 angstrom²/molecule.

11. (previously presented) A microarray in accordance with claim 4, wherein said oligonucleotide probes are present on said solid support at a surface density of from about 325 to about 375 angstrom²/molecule.

12.-17. (cancelled)

18. (withdrawn; currently amended) A method of HLA Class I tissue typing, said method comprising:

(a) amplifying exons 2 and 3 from a genomic sample of tissue using labeled primers and an asymmetric PCR method to form a labeled, single-stranded DNA sample;

(b) contacting said labeled, single-stranded DNA sample with the microarray of claim 1 ~~a microarray prepared according to claim 12~~ under hybridization conditions; and

(c) detecting a hybridization pattern for said DNA sample and assigning an HLA Class I allele type by analysis of said hybridization pattern.

19. (withdrawn; currently amended) A method of HLA tissue typing, said method comprising:

- (a) selectively amplifying the HLA regions in a genomic sample using asymmetric PCR and labeled primers to form a labeled, single-stranded DNA sample;
- (b) contacting labeled, single-stranded DNA sample with the microarray of claim 1 a ~~microarray prepared according to claim 12~~ under hybridization conditions; and
- (c) detecting a hybridization pattern for said DNA sample and assigning an HLA allele type by analysis of said hybridization pattern.

20. (cancelled)

21. (previously presented) The microarray of claim 6, wherein said HLA-A oligonucleotide probes comprise at least 86 polymorphisms.

22. (previously presented) The microarray of claim 6, wherein said HLA-B oligonucleotide probes comprise at least 185 polymorphisms.

23. (previously presented) The microarray of claim 6, wherein said HLA-C oligonucleotide probes comprise at least 45 polymorphisms.

24. (currently amended) The microarray of claim 7, wherein said HLA-B exon 2 oligonucleotide probes ~~comprise~~ comprise at least 68 polymorphisms, and wherein said HLA-B exon 3 oligonucleotide probes comprise at least 70 polymorphisms.

25. (currently amended) An array of oligonucleotides on a solid support, wherein said oligonucleotides comprise locus polymorphisms of the HLA Class I region, said oligonucleotides having a surface density on said array of from 250 to 450 angstrom²/molecule, and wherein said oligonucleotides are covalently attached to said solid support and have from 17 to 23 nucleotides.

26. (previously presented) The array of claim 25, wherein said locus polymorphisms are HLA-A locus polymorphisms or HLA-C locus polymorphisms.

27. (previously presented) The array of claim 25, wherein said locus polymorphisms are HLA-B locus polymorphisms.

28. (previously presented) The array of claim 25, wherein said locus polymorphisms are selected from the group consisting of: HLA-B locus exon 2 polymorphisms and HLA-B locus exon 3 polymorphisms.

29. (previously presented) The array of claim 26, wherein said HLA-A locus polymorphisms comprise at least 86 HLA-A locus polymorphisms.

30. (previously presented) The array of claim 26, wherein said HLA-C locus polymorphisms comprise at least 45 locus polymorphisms.

31. (previously presented) The array of claim 27, wherein said HLA-B locus polymorphisms comprise at least 185 HLA-B locus polymorphisms.

32. (previously presented) The array of claim 28, wherein said HLA-B exon 2 locus polymorphisms comprise at least 68 HLA-B locus exon 2 polymorphisms, and wherein said HLA-B locus exon 3 polymorphisms comprise at least 70 HLA-B locus exon 3 polymorphisms.

33. (previously presented) The array of claim 25, wherein said oligonucleotides have 20 nucleotides.

34. (previously presented) The array of claim 25, wherein said solid support comprises glass.

35. (previously presented) The array of claim 25, wherein said oligonucleotides further comprise a linking group, and wherein said linking group is a 15-mer.

36. (previously presented) The array of claim 35, wherein said 15-mer is a 15-mer of poly-dT.

37.-50. (cancelled)

51. (new) A microarray in accordance with claim 1, wherein said oligonucleotide probes are present on said solid support at a surface density of from 325 to 375 angstrom²/molecule.

52. (new) A microarray in accordance with claim 1, wherein said oligonucleotide probes are covalently attached to said support with a linking group comprising an aminoalkylsilane and a phenylenediisothiocyanate, and wherein said microarray comprises spots of oligonucleotide probes ranging from 100 to 150 microns in diameter.

53. (new) A microarray in accordance with claim 52, wherein said spots of oligonucleotide probes are spaced with 400-500 microns separating the center of each of said spots.

54. (new) A microarray in accordance with claim 52, wherein said phenylenediisothiocyanate is 1,4-phenylenediisothiocyanate.

55. (new) The array of claim 25, wherein said oligonucleotides are present on said solid support at a surface density of from 325 to 375 angstrom²/molecule.

56. (new) The array of claim 25, wherein said oligonucleotides are covalently attached to said support with a linking group comprising an aminoalkylsilane and a phenylenediisothiocyanate, and wherein said array comprises spots of oligonucleotides ranging from 100 to 150 microns in diameter.

57. (new) The array of claim 56, wherein said spots of oligonucleotides are spaced with 400-500 microns separating the center of each of said spots.

58. (new) The array of claim 56, wherein said phenylenediisothiocyanate is 1,4-phenylenediisothiocyanate.